

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of :  
Masayuki SHIBUTA

Serial No. NEW : Attn: APPLICATION BRANCH

Filed December 13, 2000 : Docket No. 2000\_1704A

VIBRATION GENERATING DEVICE OF  
SMALL WIRELESS MACHINE

**PRELIMINARY AMENDMENT**

Assistant Commissioner for Patents  
Washington, DC 20231

THE COMMISSIONER IS AUTHORIZED  
TO CHARGE ANY DEFICIENCY IN THE  
FEE FOR THIS PAPER TO DEPOSIT  
ACCOUNT NO. 23-0975.

Sir:

Prior to initial examination of the above-identified new patent application, kindly amend the application as follows:

**IN THE CLAIMS:**

**Kindly amend as follows:**

**Claim 3:**

Line 2, delete "or 2".

**Claim 4:**

Line 2, delete "or 2".

**Claim 5:**

Line 2, delete "or 2".

**Kindly add the following new claims:**

6. A vibration generating device of the small wireless machine according to claim 2, wherein a caulked portion is formed into a concave shape in the tip portion end surface or the flat surface by caulking from the opening side of the groove portion to the bottom side so that a length dimension at the side of the groove in an axial line direction becomes longer than a length dimension at the outer peripheral side.

7. A vibration generating device of the small wireless machine according to claim 2, wherein in a width dimension W of the tip portion end surface or the flat surface from the side of the groove to the outer peripheral side, a range of 0.25 W to 0.9 W from an edge portion at the side of the groove is caulked.

8. A vibration generating device of the small wireless machine according to claim 2, wherein the groove portion of the vibrator is formed to have such a size as to internally contain a range exceeding a center angle of 180° of the rotating shaft, and an opening width  $W_1$  of the groove portion is set so that a ratio ( $W_1/D$ ) to a diameter D of the rotating shaft of the motor is in a range of 0.70 to 0.95.

**REMARKS**

The present Preliminary Amendment is submitted to delete the multiple dependencies of claims 3-5, thereby placing such claims in condition for examination and reducing the required PTO filing fee.

Respectfully submitted,

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